



09/382524

PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Paul A. Farrar

Examiner: Fetsum Abraham

Serial No.: 09/382524

Group Art Unit: 2826

Filed: August 25, 1999

Docket No.: 303.610US1

Title: HYDROPHOBIC FOAMED INSULATORS FOR HIGH DENSITY CIRCUITS

RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RECEIVED
JAN - 5 2004
TECHNOLOGY CENTER 2800

REMARKS

Applicant has reviewed and considered the Office Action faxed by the Examiner on October 22, 2003, and the references cited therewith.

No claims are amended, no claims are canceled, and no claims are added; as a result, claims 1-11, 42-43, and 46-57 remain pending in this application. Applicant respectfully requests reconsideration of the above-identified application in view of the remarks that follow.

Pending Claims

The claims pending in the instant application are claims 1-11, 42-43, and 46-57. The Office Action Summary incorrectly lists claims 1-3, 5-7, 10, 11 and 42-57 as the pending claims. Applicant respectfully requests that subsequent Office communications reflect that claims 1-11, 42-43, and 46-57 are the claims of the instant application.

Telephonic Interview

Applicant's representative thanks examiner Abraham for his time spent on a telephonic interview on 22 October 2003 to discuss an Office Action regarding the instant application that was not received. Examiner Abraham agreed to fax the Office Action and reset the response date. The faxed Office Action included a fax date of 10/22/03 on its cover sheet. As a result, the mailing date of the Office Action is taken to be 22 October 2003.

§103 Rejection of the Claims

Claims 1-3, 5-7, 10, 11, and 42-57 were rejected under 35 USC § 103(a) as being unpatentable over Havemann et al. (U.S. Patent No. 5,747,880). Applicant traverses these grounds for rejection.

The Examiner rejected claims 1-3, 5-7, 10, 11, and 42-57 based on Havemann et al. (hereafter Havemann). Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103 since not all of the recited elements of the claims are found in Havemann. Since all the elements of the claim are not found in the reference, Applicant assumes that the Examiner is taking official notice of the missing elements. Applicant respectfully objects to the taking of official notice with a single reference obviousness rejection and, pursuant to M.P.E.P. § 2144.03, Applicant respectfully traverses the assertion of Official Notice and requests that the Examiner cite references in support of this position.

Applicant can not find in Havemann a teaching or suggestion of a foamed material layer as recited in claim 1. The Office Action states “[a]lthough the prior art omits to specify whether the dielectric material is foamed or not, it would have been obvious to one skilled in the art to conclude the material as foamed since foamed materials are porous by character.” Applicant respectfully disagrees. The fact that foamed materials may be porous does not teach or suggest a structure having a foamed material as recited in claim 1. Further, the above quoted statement is a mere conclusory statement of subjective belief, so Applicant respectfully submits that the Office Action has not provided objective evidence for such a conclusion and the Office Action does not provide a motivation to make such a conclusion.

In addition, Applicant believes that Havemann contradicts the conclusion proposed by the Office Action. Havemann, at column 2, lines 51-61, recites:

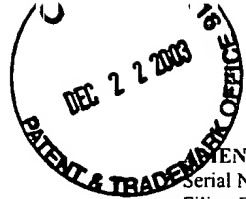
Other problems with porous dielectrics recognized herein include: decreased mechanical strength and thermal conductivity compared to solid silicon dioxide; difficulty with anisotropic (directional) etching typically required for via formation; difficulty in forming patterned layers on top of porous layers; the hydrophilic (water-wanting) nature of many finely-pored (and especially silica) dielectrics; and general unsuitability of known porous dielectric-forming methods to practical submicron device construction. Methods and structures disclosed herein allow solution to these and other problems.

From this quote from Havemann, it is clear that fabricating a porous structure is non-obvious, since there is no reasonable expectation of success for the modification to Havemann proposed by the Office Action. Applicant submits that the claimed combination of Havemann and the Office's Action unsupported proposition does not provide a teaching or suggestion of a structure as recited in claim 1. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. (Underlining added.)

Further, Havemann's proposed structure and method for solving the problems associated with porous structures is distinctly different than the structure as recited in claim 1. Claim 1 recites a "foamed material." The structure of Havemann deals with a porous structure that experiences shrinkage in fabrication. *See, Havemann, column 5, lines 45-51 and column 5, lines 64-67.* Applicant submits that a structure having a material that undergoes shrinkage in fabrication is contrary to a foamed material, and, therefore, there is no motivation to make the modification to Havemann proposed by the Office Action. A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); *In re Spinnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963).

For the reasons stated above, Applicant respectfully submits that claim 1 is patentable over Havemann. Claims 2, 3, 5-7, 10, 11, 42, and 43 recite similar elements, and are patentable over Havemann for the reasons stated above and additionally in view of the further elements recited in these independent claims.

The dependent claims that depend from claims 1, 2, 3, 5-7, 10, 11, 42, and 43 are patentable over Havemann for the reasons stated above and additionally in view of the further elements recited in these dependent claims.



AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/382524

Filing Date: August 25, 1999

Title: HYDROPHOBIC FOAMED INSULATORS FOR HIGH DENSITY CIRCUITS

Page 4
Dkt: 303.610US1

Applicant respectfully requests withdrawal of these rejections of claims 1-3, 5-7, 10, 11, and 42-57, and reconsideration and allowance of claims 1-11, 42-43, and 46-57.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

Respectfully submitted,

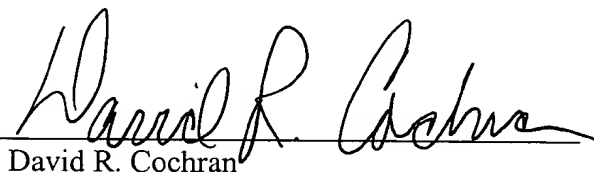
PAUL A. FARRAR

By his Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 371-2157

Date 17 December 2003

By



David R. Cochran
Reg. No. 46,632

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 17 day of December, 2003.



Name



Signature